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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,878	04/25/2001	Tomoyuki Imai	1417-348	5510

7590

05/10/2002

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EXAMINER

JOHNSON, EDWARD M

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 05/10/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/840,878

Applicant(s)

IMAI ET AL.

Examiner

Edward M. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-21,29 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-21,29 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 16-21, 29, and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 16-21, and 29 appear to contain use limitations and it is unclear how they limit an iron compound catalyst as claimed because they do not appear to limit the catalyst itself but rather a process for using the catalyst.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 16-21, 29, and 32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Iglesia et al. 5,036,032.

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Regarding claim 16, Iglesia '032 discloses catalyst metals including iron (see column 4, lines 20-21) supported as inorganic refractory oxides (see column 4, lines 38-44) comprising a diameter of 130 Angstroms (see column 9, lines 44-45), a surface area of 50-500 m²/g (see column 4, lines 50-51), and a site density of 0.064 (see Table A), 60-65% CO conversion (see column 10, line 45) and calcining at above 500 degrees at 1 degree per minute for a sufficient period of time (see column 6, lines 54-56). Iglesia does not disclose any presence of phosphorus, sulfur, or sodium (see Example 1). Units of measurement, methods of taking these measurements, and the use of the catalyst, were not themselves given patentable weight.

Regarding claims 2, 5, 17, and 19-21 Iglesia '032 discloses an iron catalyst (see column 4, lines 19-22) comprising a diameter of 130 Angstroms (see column 9, lines 44-45), a surface area of 50-500 m²/g (see column 4, lines 50-51), and a site density of 0.064 (see Table A). Iglesia discloses no presence of phosphorus, sulfur, or sodium (see Example 1).

Regarding claims 3 and 18, Iglesia '032 discloses 60-65% CO conversion (see column 10, line 45) and calcining at above 500 degrees for 1 degree per minute for a sufficient period of time (see column 6, lines 54-56), and the use of the catalyst was not given patentable weight.

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Regarding claim 4, Iglesia '032 discloses catalyst metals including iron (see column 4, lines 20-21) supported as inorganic refractory oxides (see column 4, lines 38-44).

In the event any differences can be shown for the product of the above claims, as opposed to the product taught by Iglesia '032, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results; see also In re Thorpe, 227 USPQ 964 (Fed.Cir. 1985).

Response to Arguments

5. Applicant's arguments filed 3/8/02 have been fully considered but they are not persuasive.

It is argued that the first-listed rejection is one of alleged anticipation, yet the record does not establish that the cited document anticipates any or all of the rejected claims. This is not persuasive because Applicant's claimed ranges of phosphorus, sulfur, and sodium include zero. Therefore, the claim is anticipated since no phosphorus, sulfur, or sodium is disclosed. Applicant does not appear to make any showing or argument that it would be unobvious to one of ordinary skill in the art to exclude phosphorus, sulfur, or sodium in view of the fact that none is disclosed as present. In fact, Applicant does not appear to assert that phosphorus, sulfur, or sodium is

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present in the cited prior art at all, much less outside the instantly claimed ranges. Applicant only argues that "it is not possible to determine what disclosure (if any)" is made.

However, no phosphorus, sulfur, or sodium is disclosed, therefore, it is possible to determine that it is not present, just as many other possible but undisclosed ingredients are not present.

It is argued that in addition, the Examples of Iglesia et al pertain to Co/SiO₂ Rim catalysts. This is not persuasive because Iglesia discloses catalyst metals including iron (see column 4, lines 20-21) supported as inorganic refractory oxides (see column 4, lines 38-44).

It is argued that even though Iglesia et al disclose that catalytic metals for Fischer-Tropsch reactions have been widely reported as cobalt, ruthenium, iron and nickel, it is impossible for one of ordinary skill in the art to envision the iron oxide particles or the iron oxide hydroxide particles having an average particle size. This is not persuasive because Iglesia discloses a diameter of 130 Angstroms (see column 9, lines 44-45), a surface area of 50-500 m²/g (see column 4, lines 50-51), and a site density of 0.064 (see Table A), 60-65% CO conversion (see column 10, line 45) and calcining at above 500 degrees at 1 degree per minute for a sufficient period of time (see column 6,

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lines 54-56). Iglesia does not disclose any presence of phosphorus, sulfur, or sodium (see Example 1).

It is argued that further, it is impossible for one of ordinary skill in the art to foresee the technical advantages of the present invention. This is not persuasive because the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 703-305-0216. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

EMJ
May 8, 2002


Stanley S. Silverman
Supervisory Patent Examiner
Technology Center 1700